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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/562,799	04/25/2006	Kazuhide Ouchi	283698US2PCT	1946

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EXAMINER	
TORRES, JOSEPH D	
ART UNIT	**PAPER NUMBER**
2112	

NOTIFICATION DATE	DELIVERY MODE
08/17/2007	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	10/562,799	OUCHI ET AL.	
	Examiner	Art Unit	
	Joseph D. Torres	2112	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *23 July 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-10* is/are pending in the application.

4a) Of the above claim(s) *1-6 and 9* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *7,8 and 10* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *29 March 2006* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *03/29/2006*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Applicant's election with traverse of Group IV, Claims 7-8 and 10, in the reply filed on 07/23/2007 is acknowledged. The traversal is on the ground(s) that "Although the outstanding Official Action identifies different search classifications, it is believed that the claims of the present application would have to be searched in a handful of sub-classes. Furthermore, since electronic searching is commonly performed, a search may be made of a large number of, or theoretically all, subclasses without substantial additional effort". This is not found persuasive because finding patents is not the same as searching. Searching implies each of the patents have been analyzed for relevance. The Examiner has concluded an 8 hour search on the current inventions of Claims 7-8 and 10 and any further search and analysis certainly would be s burden.

The requirement is still deemed proper and is therefore made FINAL.

Claims 1-6 and 9 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to nonelected inventions, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on 07/23/2007.

Specification

Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

2. The abstract of the disclosure is objected to because it exceeds 150 words, it exceeds one (1) paragraph and it uses legal phraseology "means". Correction is required. See MPEP § 608.01(b).

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 7 and 8 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 7 recites the limitation "the results of identification" in line 7. There is insufficient antecedent basis for this limitation in the claim.

Claim 8 recites the limitation "the results of identification" in line 7. There is insufficient antecedent basis for this limitation in the claim.

Claim 7 recites the limitation "the reliability information computed by the soft decision-identification means" in lines 11-12. There is insufficient antecedent basis for this limitation in the claim.

Claim 8 recites the limitation "the reliability information computed by the soft decision-identification means" in lines 11-12. There is insufficient antecedent basis for this limitation in the claim.

In claims 7 and 8, the phrase, "a soft decision-identification means for computing identification signals related to the results of identification by the plurality of deciders, and reliability information indicating a level of reliability of the identification signals" is indefinite since it is not clear whether the Applicant intends, --a soft decision-identification means for computing identification signals related to the results of identification by the plurality of deciders and for computing reliability information indicating a level of reliability of the identification signals-- or --a soft decision-identification means for computing identification signals related to the results of identification by the plurality of deciders and related to reliability information indicating a level of reliability of the identification signals--. For the purposes of advancing prosecution the Examiner assumes: --a soft decision-identification means for computing identification signals related to the results of identification by the plurality of deciders and for computing reliability information indicating a level of reliability of the identification signals-- since it does not appear that the alternative interpretation is taught in the specification.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 7, 8 and 10 are rejected under 35 U.S.C. 102(e) as being anticipated by Castagnozzi; Daniel M. et al. (US 7024599 B2, hereafter referred to as Castagnozzi).

35 U.S.C. 102(e) rejection of claim 7.

Castagnozzi teaches an optical-electrical converting means for converting received optical signals into electronic signals (col. 9, lines 20-24 in Castagnozzi clearly suggest that inputs 104 in Figure 3 are electronic signals derived from converted optical signals); a plurality of deciders for identifying the electronic signals converted by the optical-electrical converting means (Comparators 124-128 in Figure 3 of Castagnozzi are a plurality of deciders); a soft decision-identification means for computing identification signals related to the results of identification by the plurality of deciders, and reliability information indicating a level of reliability of the identification signals (Comparators 124-128 and Non-Causal Circuit 110 in Figure 3 of Castagnozzi comprise a soft decision-identification means for computing identification signals 122 related to the results of identification 108a-108c by the plurality of deciders/Comparators 124-128, and reliability

information 108a-108c indicating a level of reliability of the identification signals according to the Table in Figure 4); an error correction means for correcting error in the identification signals, by using the reliability information computed by the soft decision-identification means (Non-Causal circuit in Figure 3 of Castagnozzi is an error correction means for correcting error in the identification signals 122, by using the reliability information 108a-108c computed by the soft decision-identification means along with past and future decision information); and a control means for executing hard decision-identification of the electronic signals in any one of the plurality of deciders (FEC Circuit 130 in Figure 3 of Castagnozzi is a control means for executing hard decision-identification of the electronic signals in any one of the plurality of deciders by applying voltage control signals 106a-106c), for measuring based on the hard decision identification results, the average amplitude of the electronic signals (claim 15 of Castagnozzi teaches that the third Threshold Generator of FEC circuit 130 in Figures 3, 5 and 6 measures average/voltage amplitude of the electronic signals based on identification signals 122, which are based on hard decision identification results of Deciders/Comparators 124 and 126), and for correcting, based on the variation over time in the measured average amplitude, thresholds in the plurality of deciders in the soft decision-identification means (Threshold Generators 202-206/602-606 in Figure 5 and 6 of Castagnozzi teaches correcting, based on the variation over time in the measured average amplitude, thresholds in the plurality of deciders in the soft decision-identification means).

35 U.S.C. 102(e) rejection of claim 8.

Castagnozzi teaches an optical-electrical converting means for converting received optical signals into electronic signals (col. 9, lines 20-24 in Castagnozzi clearly suggest that inputs 104 in Figure 3 are electronic signals derived from converted optical signals); a plurality of deciders for identifying the electronic signals converted by the optical-electrical converting means (Comparators 124-128 in Figure 3 of Castagnozzi are a plurality of deciders); a soft decision-identification means for computing identification signals related to the results of identification by the plurality of deciders, and reliability information indicating a level of reliability of the identification signals (Comparator 128 and Non-Causal Circuit 110 in Figure 3 of Castagnozzi comprise a soft decision-identification means for computing identification signals 122 related to the results of identification 108a-108c by the plurality of deciders/Comparators 124-128, and reliability information 108a-108c indicating a level of reliability of the identification signals according to the Table in Figure 4); an error correction means for correcting error in the identification signals, by using the reliability information computed by the soft decision-identification means (Non-Causal circuit in Figure 3 of Castagnozzi is an error correction means for correcting error in the identification signals 122, by using the reliability information 108c computed by the soft decision-identification means along with past and future decision information); a hard decision-decider capable of executing hard decision-identification of the electronic signals, independently from the soft decision-identification means (Comparators 124 and 126 in Figure 3 of Castagnozzi are a hard decision-decider capable of executing hard decision-identification 108a and 108b of the

electronic signals, independently from the soft decision-identification means); and a control means for executing the hard decision-identification of the electronic signals by using the hard decision-decider ((FEC Circuit 130 in Figure 3 of Castagnozzi is a control means for executing hard decision-identification of the electronic signals by using the hard decision-decider and by applying voltage control signals 106a-106c)), for measuring, based on the hard decision-identification results, the average amplitude of the electronic signals (claim 15 of Castagnozzi teaches that the third Threshold Generator of FEC circuit 130 in Figures 3, 5 and 6 measures average/voltage amplitude of the electronic signals based on identification signals 122, which are based on hard decision identification results of Deciders/Comparators 124 and 126), and for correcting, based on the variation over time in the measured average amplitude, thresholds in the plurality of deciders in the soft decision-identification means (Threshold Generators 202-206/602-606 in Figure 5 and 6 of Castagnozzi teaches correcting, based on the variation over time in the measured average amplitude, thresholds in the plurality of deciders in the soft decision-identification means).

35 U.S.C. 102(e) rejection of claim 10.

Castagnozzi teaches a step of converting received optical signals into electronic signals col. 9, lines 20-24 in Castagnozzi clearly suggest that inputs 104 in Figure 3 are electronic signals derived from converted optical signals); a step of executing hard decision-identification of the electronic signals converted in the optical-electrical converting step by using a decider (Comparators 124 and 126 in Figure 3 of

Castagnozzi are a plurality of deciders for executing hard decision-identification of the electronic signals converted in the optical-electrical converting step by using a decider; Note: Comparators 124 and 126 test positive for hard ones and hard zeros as indicated in the table of Figure 4); and a step of measuring, based on the hard decision-identification results, the average amplitude of the electronic signals (Threshold Generators 202-206/602-606 in Figure 5 and 6 of Castagnozzi teaches correcting, based on the variation over time in the measured average amplitude, thresholds in the plurality of deciders in the soft decision-identification means).

Conclusion

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph D. Torres whose telephone number is (571) 272-3829. The examiner can normally be reached on M-F 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jacques Louis-Jacques can be reached on (571) 272-6962. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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Art Unit 2112